

AMENDMENT

IN THE SPECIFICATION

After the title of invention, please add the following section heading and sentence:

REFERENCE TO RELATED APPLICATIONS

This application is a National Stage Application of PCT Application PCT/US03/00977 filed on January 14, 2003, which claims priority to United States Provisional Application No. 60/348,834 filed January 15, 2002.

Please amend the paragraph starting on page 1, line 13 as follows:

Hoses are also formed by helically winding hose tape around an internal mandrel having a desired shape. The tape is then cured to form ~~thea~~ finished hose ~~of~~having the desired shape, and the mandrel is withdrawn.

Please amend the paragraph starting on page 1, line 16 as follows:

Another prior method of forming a hose includes confining a hose pre-form inside a spirally shaped confining wall that provides exterior support. The confining wall includes a top half and a lower half. The hose is placed in the lower half of the confining wall, and the top half is then placed over the lower half to trap the hose. The confining wall provides exterior support as the hose is cured. A drawback to this method is that finishing operation is needed because the ends are trapped in the support wall ~~and that~~. Additionally, the confining wall leaves a visible seam on the hose.

Please amend the paragraph starting on page 1, line 23 as follows:

Hoses ~~are~~can also be cured ~~while~~by passing the hose through a microwave zone. The outer surface of the tube is simultaneously contacted by a cool stream of fluid that cures the hose. In this method, the outer surface of the tube does not contact any structure or surface.

Please amend the paragraph starting on page 2, line 2 as follows:

_____A polymeric hose pre-form is inserted into a pre-shaped tube and is formed into a desired shape. The hose pre-form is first cut to a desired length. A first end of the hose pre-form is inserted into a loading end of the tube. Preferably, the first end is lubricated to assist in loading of the tube. After loading is complete, the outer surface of the hose pre-form contacts the inner surface of the tube.

Please amend the paragraph starting on page 2, line 7 as follows:

_____A vacuum endcap is positioned on an opposing vacuum end of the tube. A vacuum applied at the vacuum endcap draws the hose pre-form through the tube until the first end of the hose pre-form is flush with the vacuum endcap. A loading endcap is then positioned on the loading end of the tube. Preferably, both ends of the hose pre-form are flush with the endcaps ~~and a finishing operation is not needed.~~

Please amend the paragraph starting on page 2, line 12 as follows:

The hose pre-form is then cured to maintain the hose in the shape of the tube. After curing, the loading endcap is removed from the tube, and the cured hose is removed from the loading end of the tube ~~from the loading end.~~ The ends of the hose contact the endcaps, and therefore a finishing operation is not needed.

Please amend the paragraph starting on page 2, line 15 as follows:

If the inner diameter of one of the ends of the hose ~~is required~~ needs to be ~~made~~ larger or flared, a mandrel or plug is inserted into the desired end of the tube pre-form prior to curing. The mandrel or plug increases ~~the size of~~ the inner diameter of the hose.

Please amend the paragraph starting on page 2, line 18 as follows:

_____These and other features of the present invention will be best understood from the following specification and drawings.

Please amend the paragraph starting on page 3, line 8 as follows:

The uncured hose pre-form 12 is first cut to a desired length. A first end 16 of the hose pre-form 12 is inserted into a loading end 18 of the tube 14. During loading of the hose 12, the tube 14 is held stationary by a clamping block. Preferably, the first end 16 is lubricated to assist in loading. As the first end 16 of the hose 12 is pulled through the tube 14, the lubrication spreads over the surface of the hose 12 to further assist in loading. The outer surface of the hose 12 contacts the inner surface of the tube 14 ~~that defines~~ to define the desired shape of the hose 12 when loading is complete.

Please amend the paragraph starting on page 3, line 15 as follows:

A vacuum endcap 20 is positioned on an opposing vacuum end 22 of the tube 14. A vent tube 24, such as a roll pin, is inserted into the vacuum endcap 20. The vacuum endcap 20 determines the outer diameter of the hose 12 as the point of contact of the vacuum endcap 20 and the hose 12. The vent tube 24 determines the inner diameter of the hose 12 as the point of contact of the vent tube 24 and the hose 12. A vacuum 26 connected to the vent tube 24 applies a vacuum that draws the hose 12 through the entire length of the tube 14 until the first end 16 of the hose 12 is flush with the vacuum endcap 20. The vacuum 26 is stopped once the hose 12 is positioned in the tube 14. Although a vacuum 26 is disclosed, it is to be understood that other methods can be employed to draw the hose 12 into the tube 14. For example, the hose 12 can be manually pulled into the tube 14.

Please amend the paragraph starting on page 4, line 14 as follows:

The inner diameter of the hose 12 is determined by extrusion. During curing, the hose 12 is subjected to pressure. ~~As the~~ The vacuum endcap 20 includes a vent tube 24, and the pressure on the inside and the outside of the hose 12 is therefore equalized, preventing to prevent the hose 12 from collapsing during curing. One of the endcaps 22 and 28 must be allowed to vent to equalize the pressure inside the hose 12. In Figure 1, the endcap 22 is vented by the vent tube 24.

Please amend the paragraph starting on page 5, line 1 as follows:

The inner diameter F of one of the ends 16 and 30 of the hose 12 can be made larger or flared by inserting a plug or a mandrel 32 into the desired end 16 and 30 of the hose 12 to increase the inner diameter F of the hose 12 at the desired end 16 and 30. Figure 2 illustrates a hollow plug 32 inserted into the second end 30 of the hose 12. Although it is illustrated and described that the plug 32 is ~~being~~ inserted into the second end 30 of the hose 12, it is to be understood that a plug 32 can be inserted into the first end 16 or into both ends 16 and 30 of the hose 12. The plug 32 has a given length and expands the inner diameter of the hose 12 to an enlarged inner diameter G at the points where the plug 32 contacts the inner diameter F of the hose 12. As shown, the loading endcap 28 includes a hole 34 to allow for insertion of the plug 32. The length of the plug 32 also depends on the hose 12 requirements and customers specifications. Curing the hose 12 retains the flared shape of the end 30.

Please amend the paragraph starting on page 5, line 13 as follows:

The hollow plug 32 allows the inside [[G]] of the hose 12 to vent, preventing the hose 12 ~~from collapsing of the hose 12~~ during curing due to the pressure on the outside of the hose 12. By providing a vent, the atmospheric pressure on the inner surface and the outer surface of the hose 12 can be equalized. If a plug ~~24 and~~ 32 is employed at both ends ~~20~~16 and 30 of the hose 12, the plugs ~~24 and~~ 32 must be hollow to allow the inside of the hose 12 to vent. If only one plug 32 is employed, the plug 32 can be solid, or a mandrel, as the other end of the hose 12 is open.

Please amend the paragraph starting on page 5, line 20 as follows:

Although a hose pre-form 12 has been illustrated and described, it is to be understood that other pre-forms can be utilized. The hose pre-form [[14]]12 can also be a fuel line, a synthetic brake line, a reinforced hose, a non-reinforced hose, a seal or a gasket, either solid, hollow, dense and sponge.